

REMARKS

Claims 1, 9, 15, 19, 22, and 23 have been amended, and claim 24 has been previously cancelled. Thus, claims 1-23 are pending in the present application. The claim amendments are supported by the specification and drawings as originally filed, with no new matter being added. Accordingly, favorable reconsideration of the pending claims is respectfully requested.

Claims 1, 2, 6, 9-15, 17, and 23 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,343,354 to Lee et al. (hereafter "*Lee*") in view of Volume 1 of the text by Wolf et al. (hereafter "*Wolf* (Vol. 1)") for the reasons set forth on pages 2-5 of the Office Action. Applicants respectfully traverse.

Independent claims 1 and 15 have been amended to recite:

forming a storage node within said container cell;
forming a cell dielectric over said storage node;
forming a cell plate over said cell dielectric; and
forming an insulating layer over said cell plate and within said container cell.

Support for these limitations can be found in the application as filed on page 10, paragraphs [029] and [030], and in Figure 8. Independent claim 23 has been amended to recite "forming an insulating layer over said cell plate and within said container cell." While forming an insulating layer within the container cell is not specifically described in the specification as originally filed, such an insulating layer is shown in Figure 8 within container cell 28 and disposed between bit line 38 and cell plate 34. The specification has been amended to add a new paragraph describing this feature shown in Figure 8.

Lee discloses a stacked trench capacitor in which a storage electrode (SE) is formed in a trench 50, a dielectric film 20 is formed on the storage electrode, and a plate electrode (PE) is formed on the dielectric film 20 (*see* Figures 4C-4E; col. 7, lines 1-13). There is no teaching or suggestion in *Lee* of "forming an insulating layer over said cell plate and within said container

cell” as recited in present claims 1, 15, and 23. No such insulating layer is disclosed in *Lee* or *Wolf* (Vol. 1). Even if such an insulating layer were to be added to the capacitor structure of *Lee*, the insulating layer would not be *within* the container cell, since the upper surface of the plate electrode (PE) is above the trench 50 as shown in Figure 4E.

Thus, claims 1, 15, and 23, as well as dependent claims 2, 6, 9-14, and 17, would not have been obvious over *Lee* in view of *Wolf* (Vol. 1). Applicants therefore respectfully request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn.

Claim 3 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lee* in view of *Wolf* (Vol. 1), and further in view of U.S. Patent No. 5,872,045 to Lou et al. (hereafter “*Lou*”) for the reasons set forth on pages 5-6 of the Office Action. Applicants respectfully traverse.

Claim 3 depends from claim 1 and includes the limitations thereof. As discussed above, there is no teaching or suggestion in *Lee* or *Wolf* (Vol. 1) of “forming an insulating layer over said cell plate and within said container cell” as recited in claim 1. Such a feature is also not disclosed in *Lou*.

Hence, claim 3 would not have been obvious over *Lee* in view of *Wolf* (Vol. 1) and *Lou*. Applicants therefore respectfully request that the rejection of claim 3 under 35 U.S.C. § 103(a) be withdrawn.

Claims 4, 5, and 16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lee* in view of *Wolf* (Vol. 1), and further in view of U.S. Patent No. 5,064,683 to Poon et al. (hereafter “*Poon*”) for the reasons set forth on pages 6-7 of the Office Action. Applicants respectfully traverse.

Claims 4 and 5 depend from claim 1, and claim 16 depends from claim 15. Thus, claims 4-5 and 16 include the respective limitations of claims 1 and 15. As discussed previously, there is no teaching or suggestion in *Lee* or *Wolf* (Vol. 1) of “forming an insulating layer over said cell plate and within said container cell” as recited in claims 1 and 15. Such a feature is also not disclosed in *Poon*.

Thus, claims 4, 5, and 16 would not have been obvious over *Lee* in view of *Wolf* (Vol. 1) and *Poon*. Applicants therefore respectfully request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn.

Claim 7 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lee* in view of *Wolf* (Vol. 1), and further in view of Volume 3 of the text by Wolf (hereafter “*Wolf* (Vol. 3)”) for the reasons set forth on pages 7-8 of the Office Action. Applicants respectfully traverse.

Claim 7 depends from claim 1 and includes the limitations thereof. As discussed above, there is no teaching or suggestion in *Lee* or *Wolf* (Vol. 1) of “forming an insulating layer over said cell plate and within said container cell” as recited in claim 1. Such a feature is also not disclosed in *Wolf* (Vol. 3).

Hence, claim 7 would not have been obvious over *Lee* in view of *Wolf* (Vol. 1) and *Wolf* (Vol. 3). Applicants therefore respectfully request that the rejection of claim 7 under 35 U.S.C. § 103(a) be withdrawn.

Claims 8 and 18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lee* in view of *Wolf* (Vol. 1), and further in view of Volume 2 of the text by Wolf (hereafter “*Wolf* (Vol. 2)”) for the reasons set forth on pages 8-9 of the Office Action. Applicants respectfully traverse.

Claims 8 and 18 depend from claims 1 and 15, respectively, and thus include the limitations of claims 1 and 15. As discussed previously, there is no teaching or suggestion in *Lee* or *Wolf* (Vol. 1) of “forming an insulating layer over said cell plate and within said container cell” as recited in claims 1 and 15. Such a feature is also not disclosed in *Wolf* (Vol. 2).

Thus, claims 8 and 18 would not have been obvious over *Lee* in view of *Wolf* (Vol. 1) and *Wolf* (Vol. 2). Applicants therefore respectfully request that the rejection of claims 8 and 18 under 35 U.S.C. § 103(a) be withdrawn.

Claims 19-22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lee* in view of *Wolf* (Vol. 1) and *Lou* for the reasons set forth on pages 9-11 of the Office Action. Applicants respectfully traverse.

Independent claim 19 has been amended to recite:

- forming a storage node within said container cell;
- forming a cell dielectric over said storage node;
- forming a cell plate over said cell dielectric; and
- forming an insulating layer over said cell plate and within said container cell.

As discussed previously with respect to claims 1, 15, and 23, there is no teaching or suggestion in *Lee* or *Wolf* (Vol. 1) of “forming an insulating layer over said cell plate and within said container cell” as recited in present claim 19. Such a feature is also not disclosed in *Lou*.

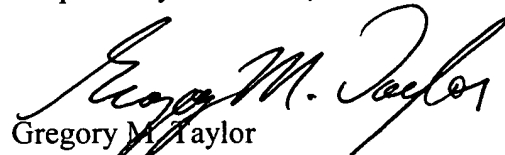
Hence, claim 19 and dependent claims 20-22 would not have been obvious over *Lee* in view of *Wolf* (Vol. 1) and *Lou*. Applicants therefore respectfully request that the rejection of these claims under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In view of the foregoing, Applicants respectfully request favorable reconsideration and allowance of the pending claims. In the event the Examiner finds any impediment to the prompt allowance of this application that could be clarified by a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney.

Dated this 6th day of May 2004.

Respectfully submitted,



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